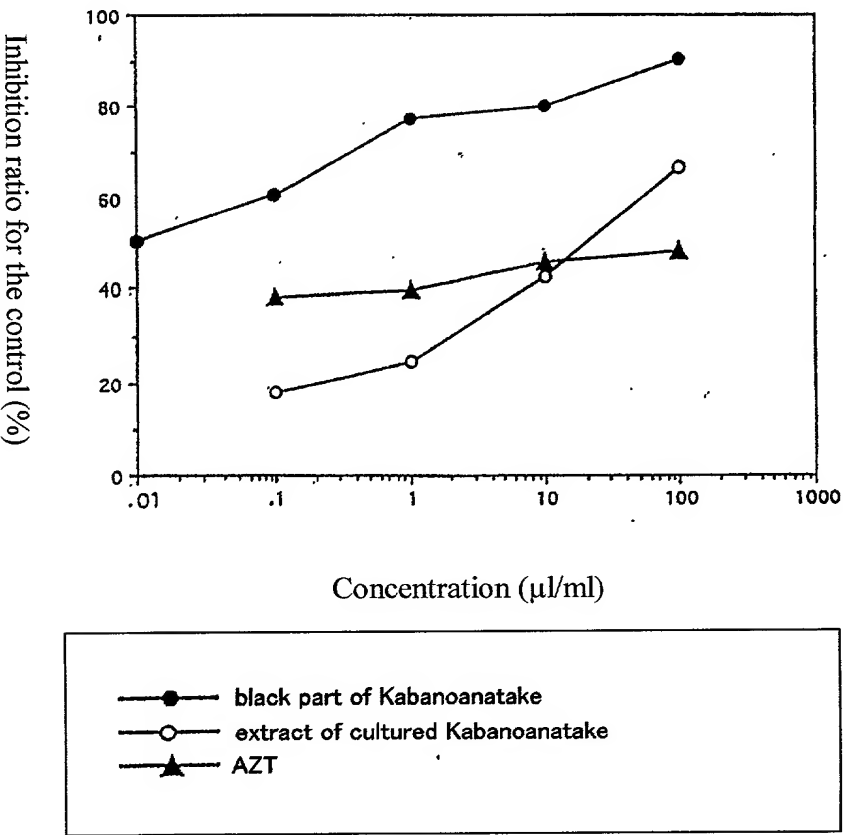
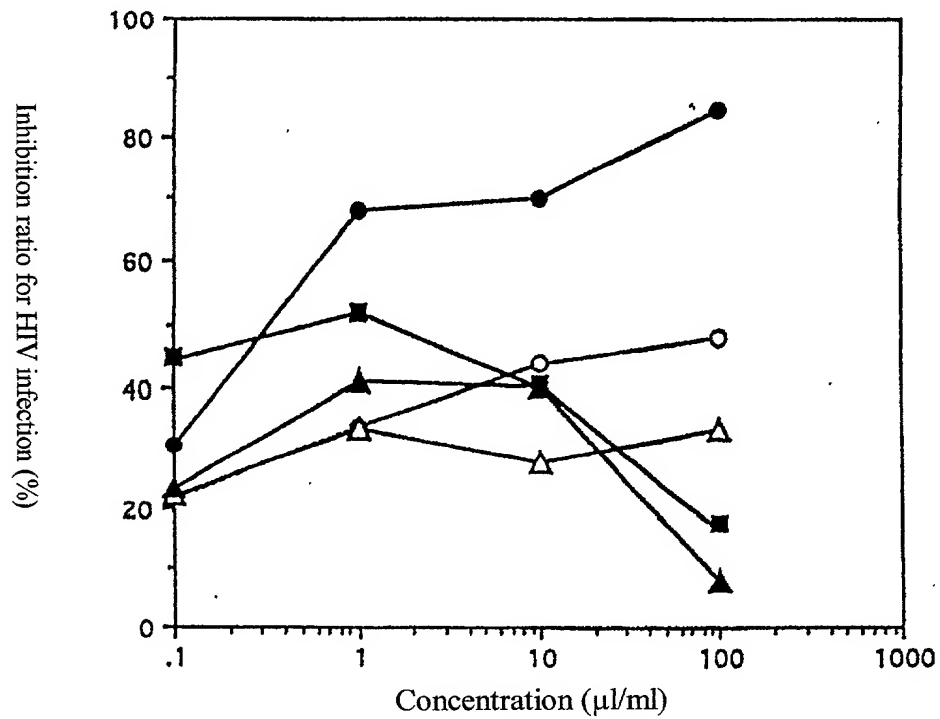


**Fig. 1**  
**Inhibition effects of anti-HIV agents of the present invention on the syncytium formation of non-infected cells co-cultured with infected cells**



**Fig. 2**

**Inhibition effects of anti-HIV agents of the present invention on HIV production by PHA-stimulated peripheral blood mononuclear cells that was made to be newly infected.**



- black part of Kabanoanatake (natural)
- cultured extract
- hyphae cultured and dried by heating
- △— cultured hyphae
- ▲— cultured filtrate

Fig. 3

## Number of viable cells

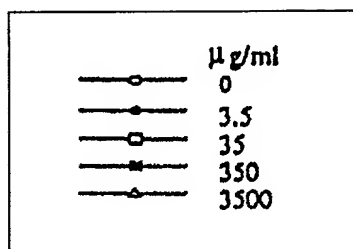
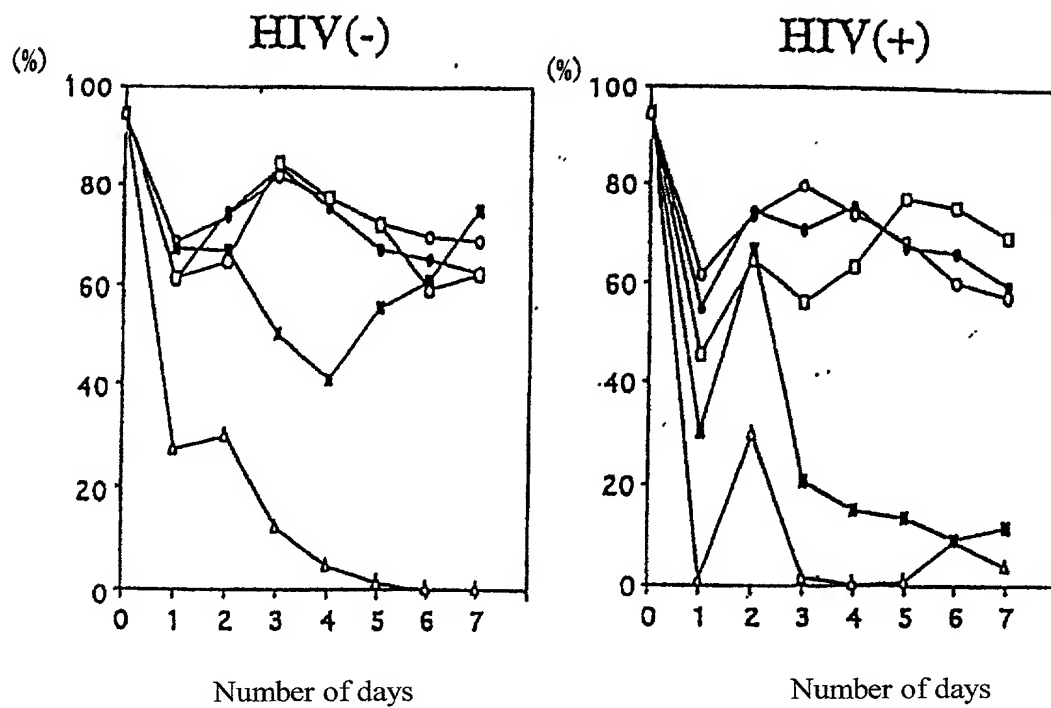
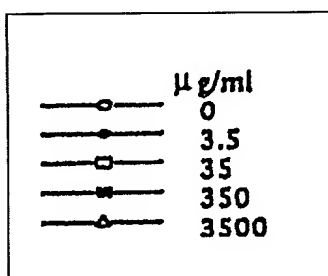
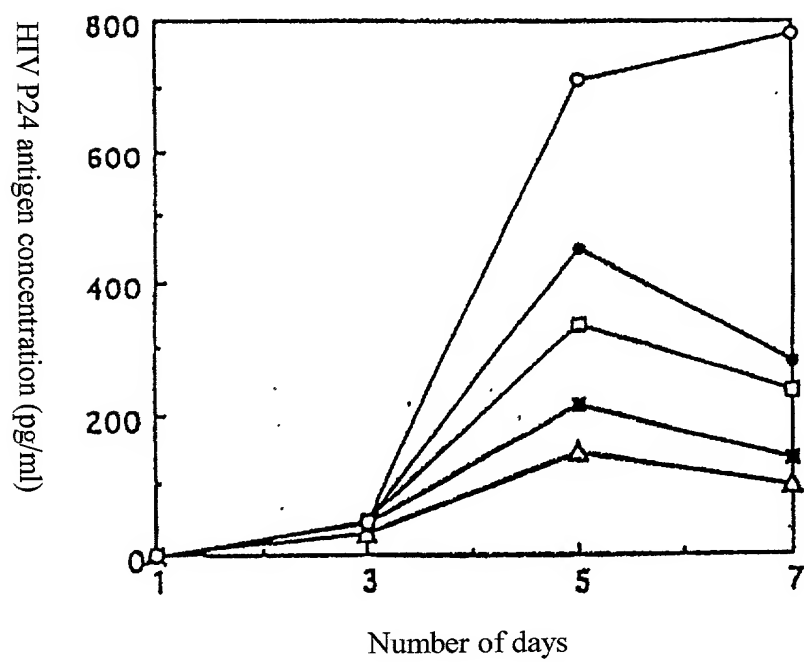


Fig. 4

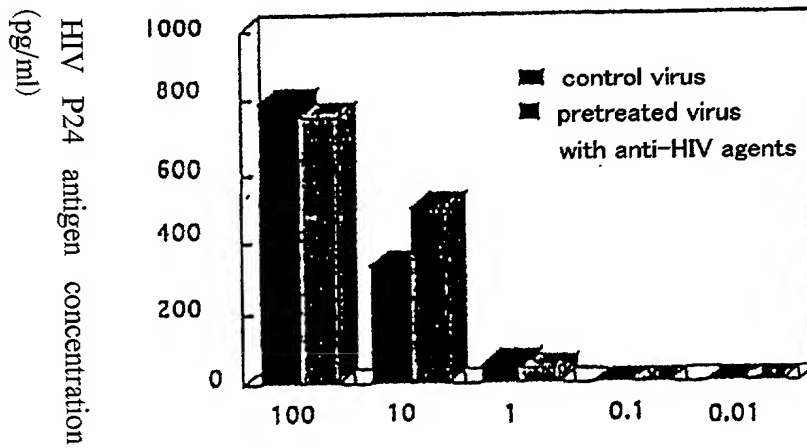
## ELISA test for HIV P24 antigen yield



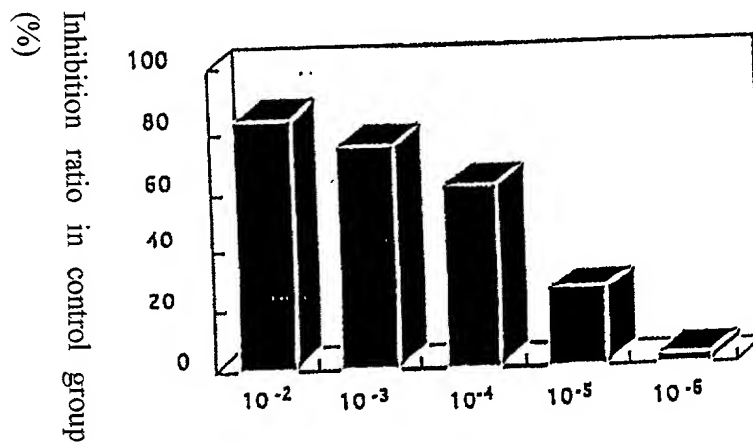
**Fig. 5**

**Anti-HIV effects of pretreated PHA-stimulated peripheral blood mononuclear cells with Kabanoanatake**

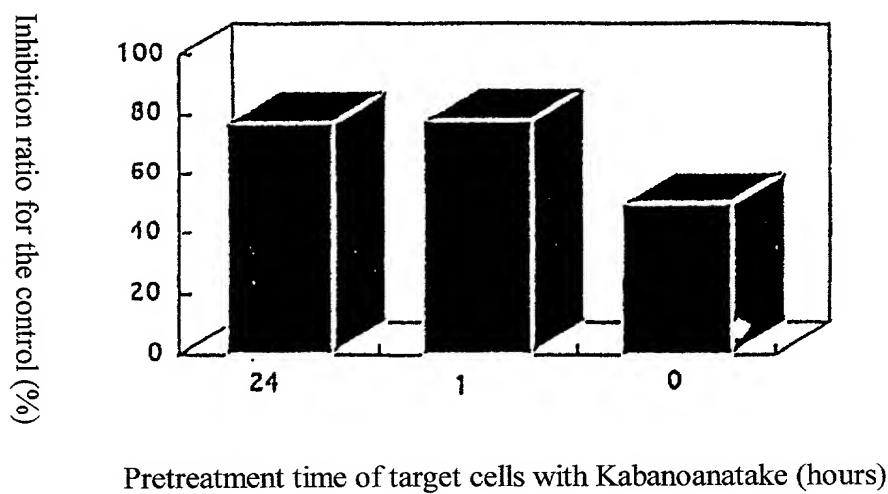
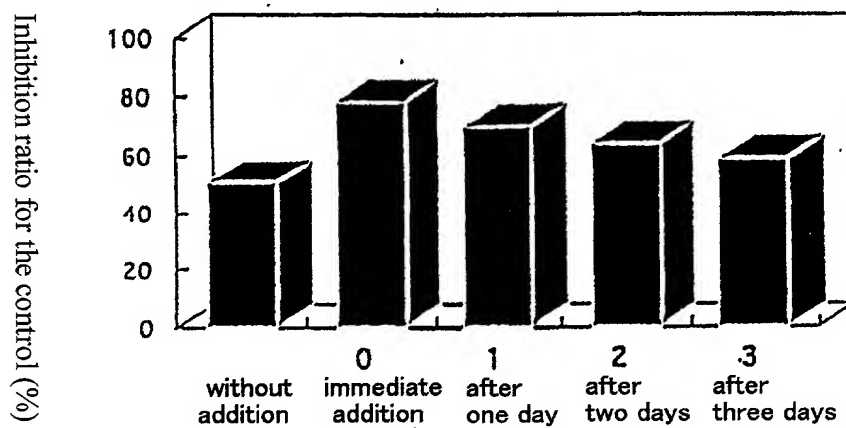
**A The effects of pretreatment HIV with Kabanoanatake**



**B The effects of target cell pretreatment with Kabanoanatake**

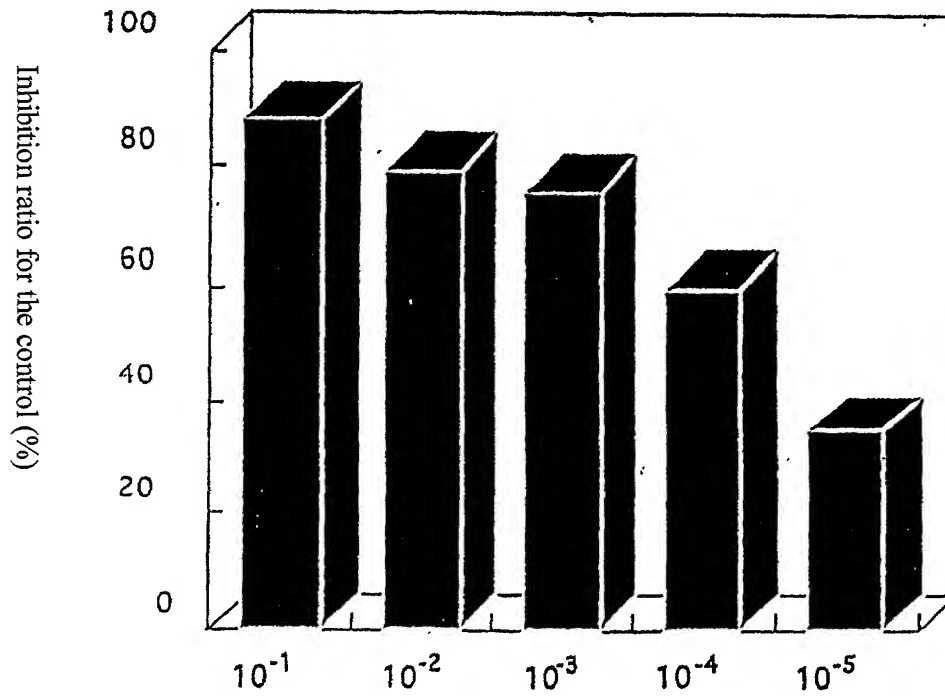


\* The anti-HIV agents were prepared in PBS solution at the concentration of 3.5 mg/ml.

**Fig. 6****A The effects of pretreatment of target cells with Kabanoanatake****B The effects of addition of Kabanoanatake in various incubation time after target cells pretreatment with anti-HIV agents for approximately one hour**

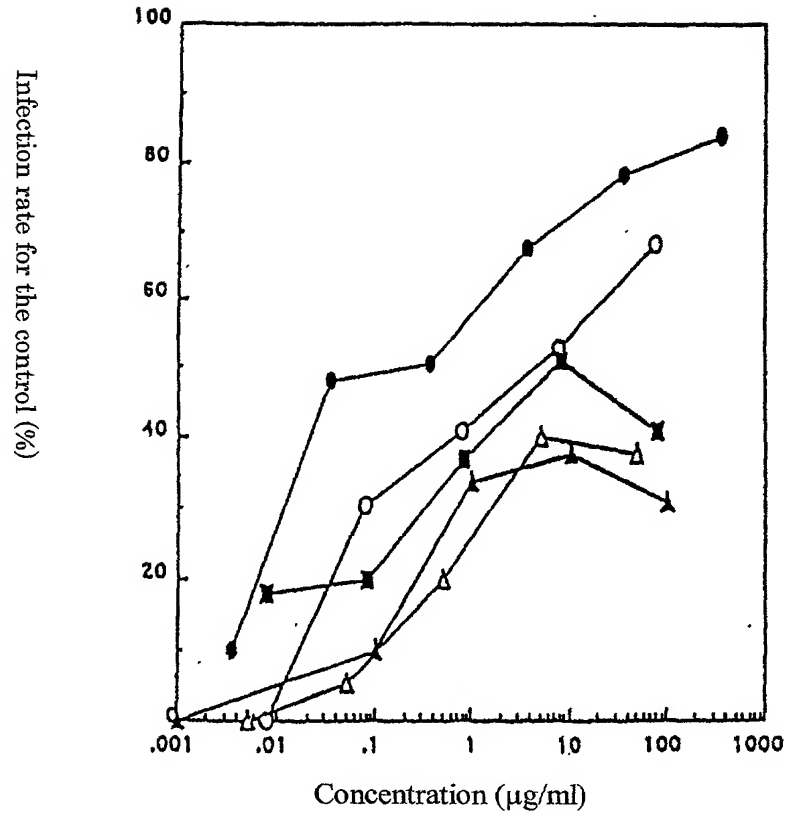
**Fig. 7**

**Inhibition effects of anti-HIV agents of the present invention on the syncytium formation of non-infected cells co-cultured with infected cells**



\* The anti-HIV agents were prepared at the concentration of 3.56 mg/ml.

Fig.8

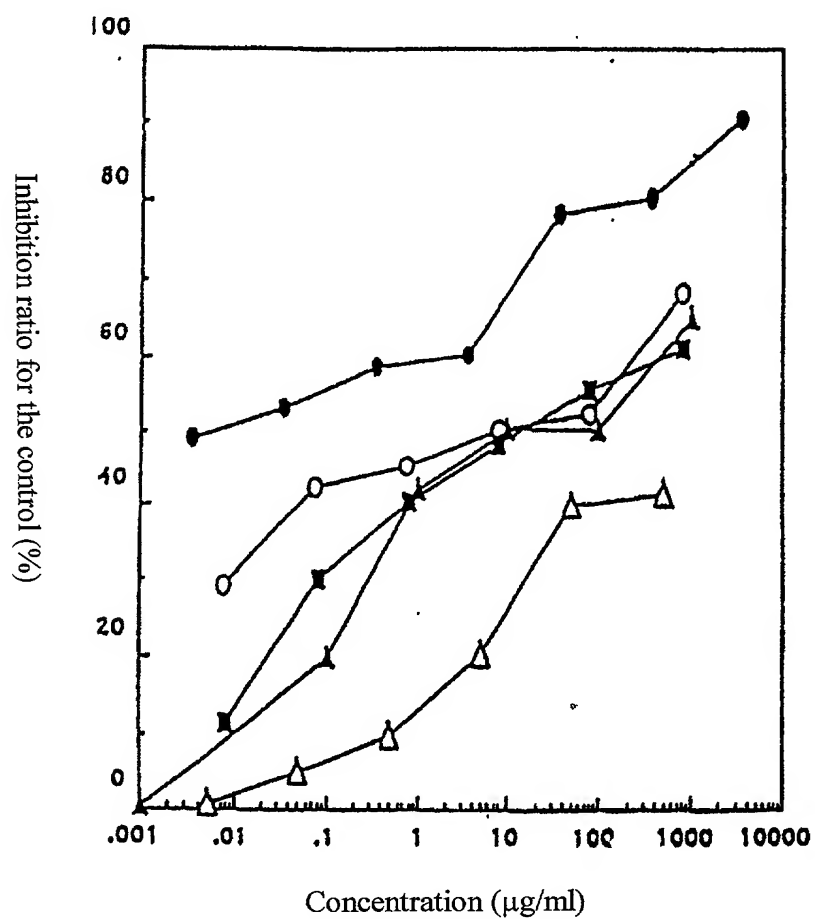


- black part
- sawdust culture
- hyphae liquid cultured and dried
- △— filtrate
- ▲— cultured hyphae



Fig. 9

Inhibition effects of various Kabanoanatake of the present invention on the syncytium formation of non-infected cells co-cultured with infected cells



- black part
- sawdust culture
- hyphae liquid cultured and dried
- △— filtrate
- ▲— cultured hyphae

**Fig. 10****Report of separation of HIV**July, 18<sup>th</sup>, 1995Day of receipt of samples: June, 14<sup>th</sup>, 1995

## (1) Tissue culture infectious dose (TCID)

Total TCID (/ ml)	0
Cell TCID ( $/1 \times 10^6$ )	0
Plasma TCID (/ ml)	0
Cytopathic effect	0

## (2) Anti-HIV antibody in plasma by western blotting methods.

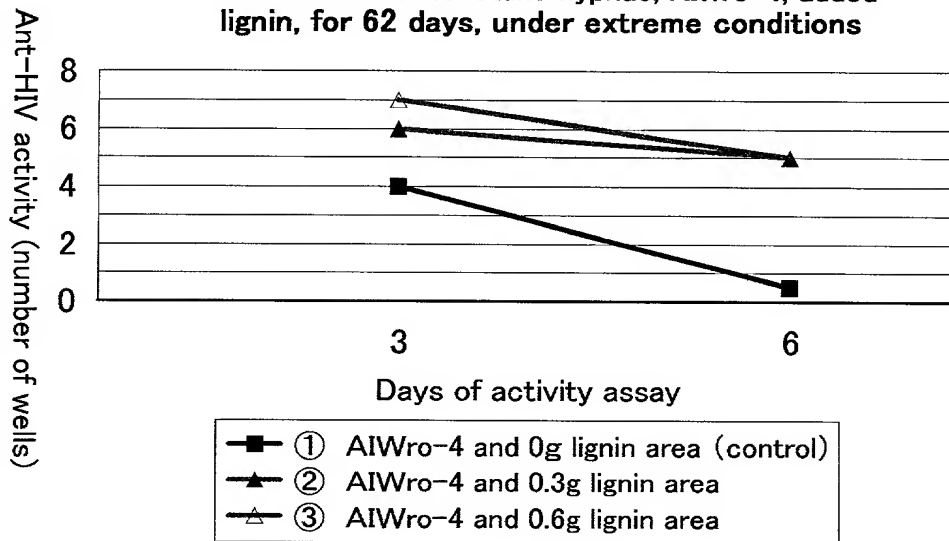
gp160 (env)	gp120 (env)	p65 (pol)	p55 (gag)	p51 (pol)	gp41-43 (env)	p32 (pol)	p24 (gag)	p18 (gag)	p15 (gag)
++	++	++	++	++	++	++	++	++	++

## (3) Host range index

(Correspondence column) The virus was not isolated.

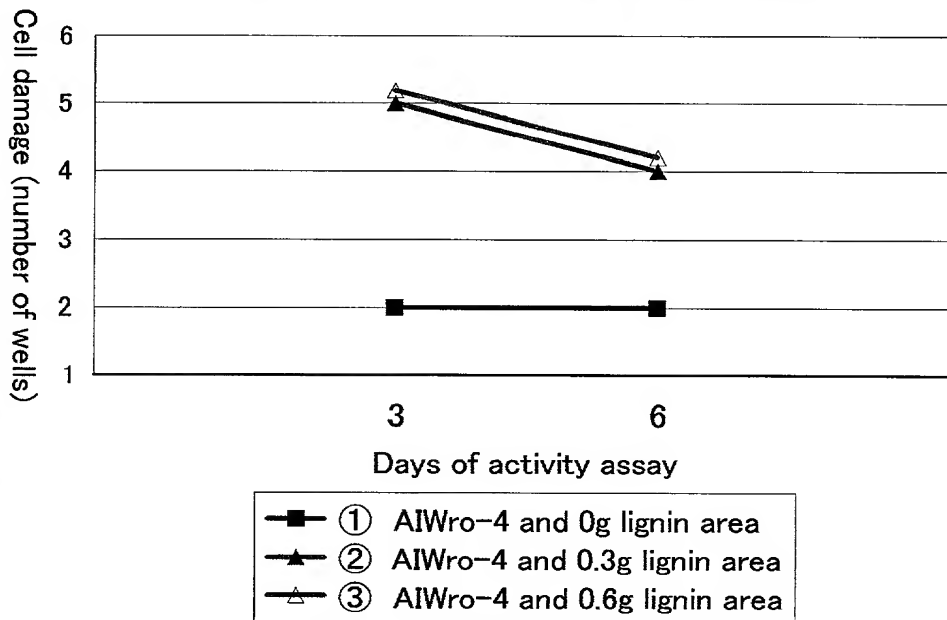
(Annotation) In also a blood test after three months for the same patient, TCID value was excellent (zero).

**Fig.11 Perfect inhibition effects on HIV, in a liquid culture of Kabanoanatake hyphae, AIWro-4, added lignin, for 62 days, under extreme conditions**

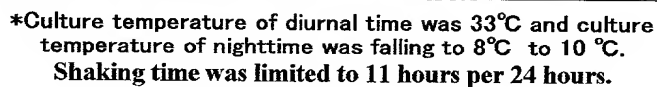


\* The well number below 1 means that perfect inhibition effects on HIV is not obtainable.

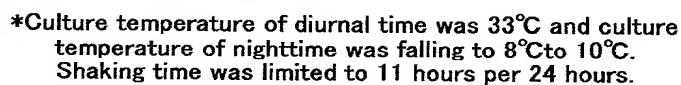
**Fig.12 Cell damage in a liquid culture of Kabanoanatake hyphae, AIW ro-4, when lignin was added**



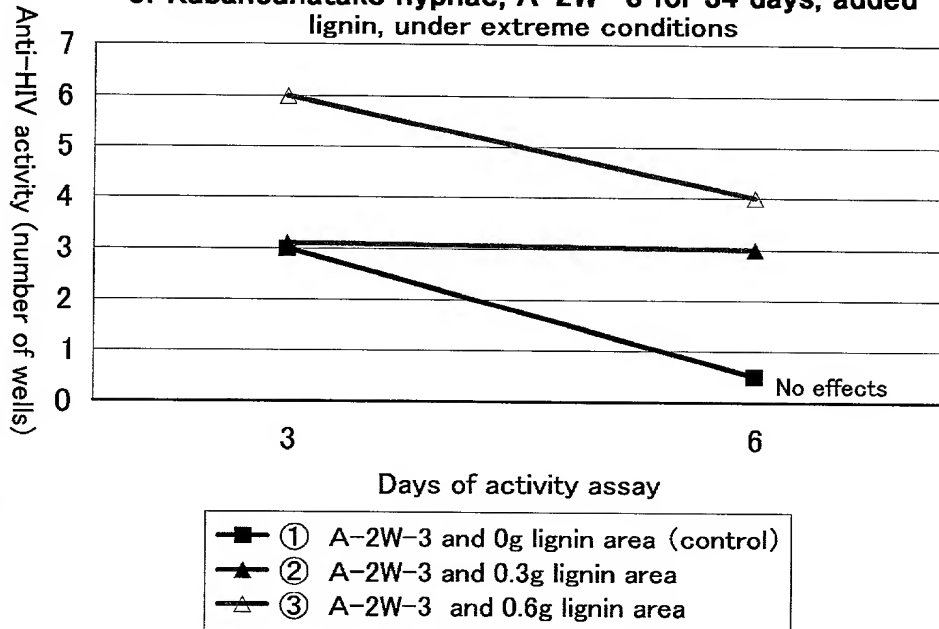
number of wells showed perfect inhibition



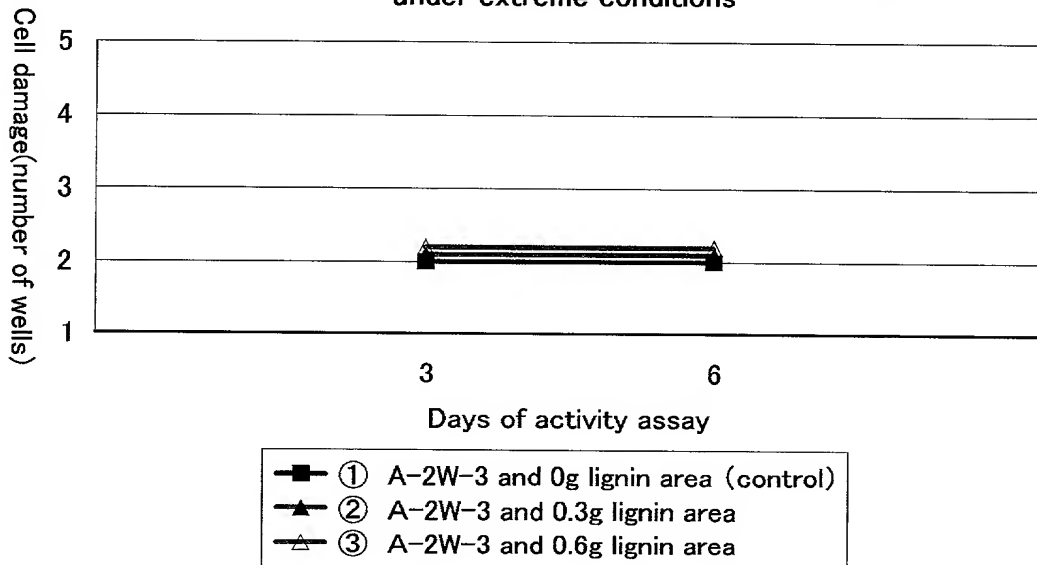
Cell damage (number of wells)



**Fig.15 Perfect inhibition effects on HIV in a liquid culture of Kabanoanatake hyphae, A-2W-3 for 34 days, added lignin, under extreme conditions**

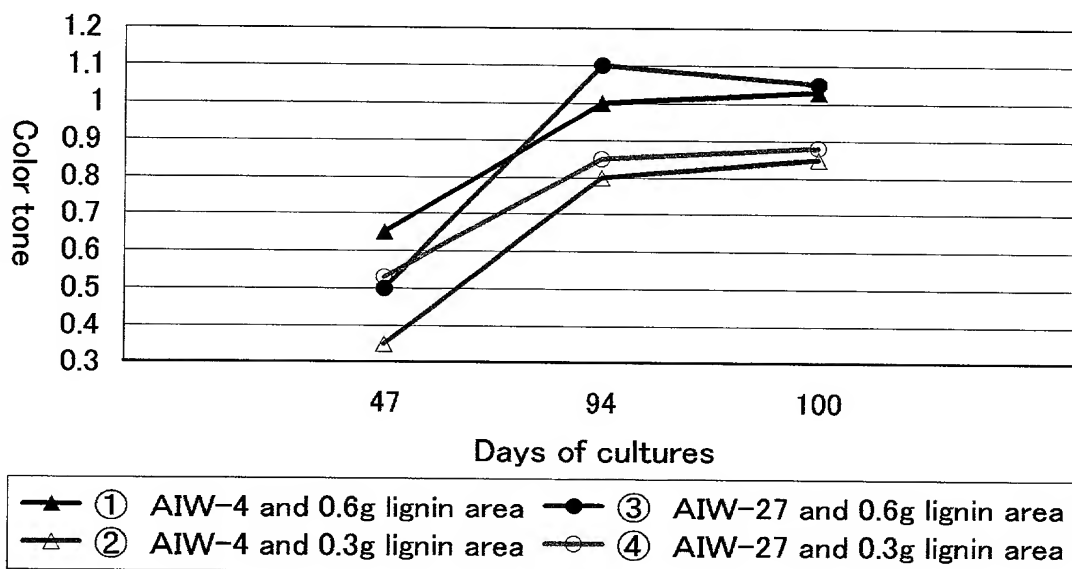


**Fig.16 Cell damage in a liquid culture of Kabanoanatake hyphae, A-2W-3, for 34 days, in the area added lignin, under extreme conditions**



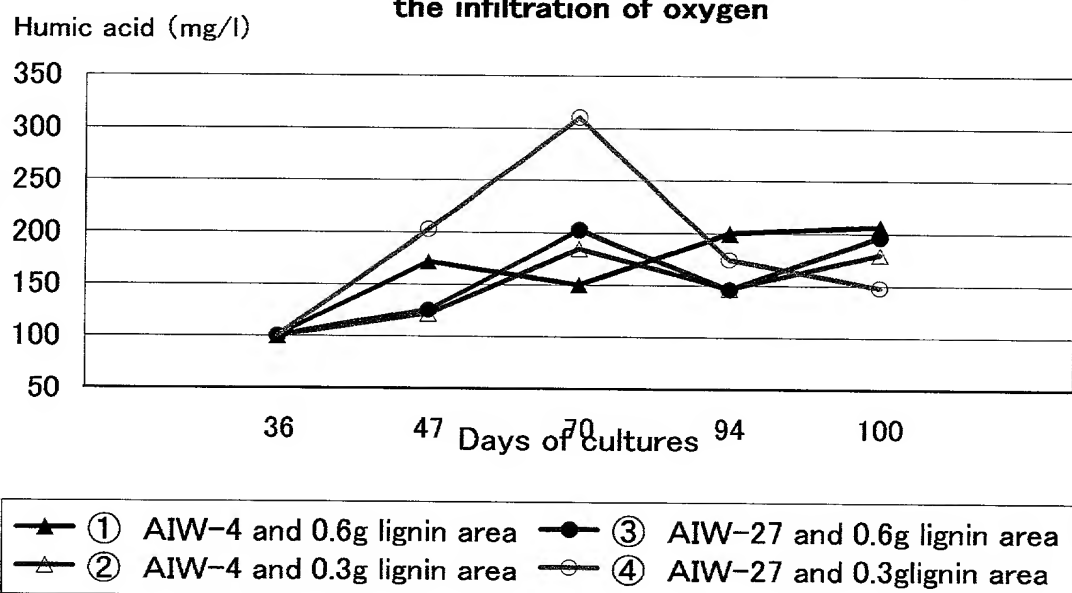
\* The lines of ①, ② and ③ are the same values, so they are overlapped.

**Fig.17 Change in black color tone (500 nm) in a long-term culture test of Kabanoanatake, restricting the infiltration of oxygen**



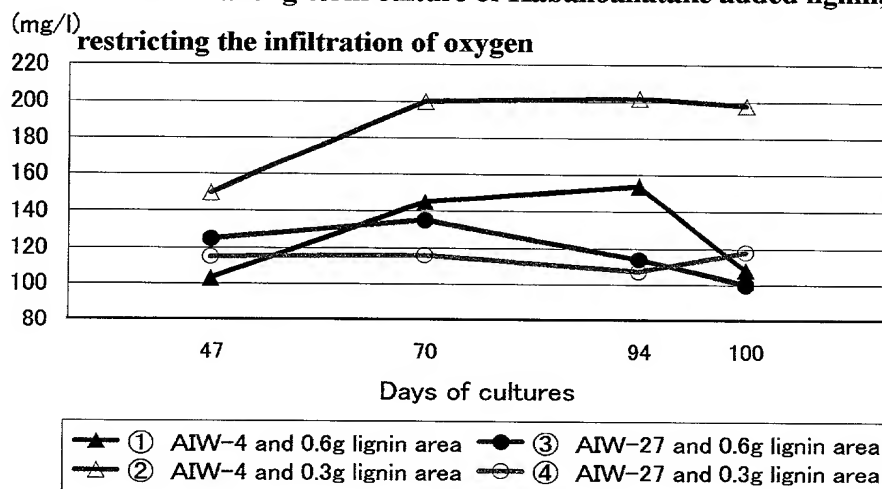
\*The control group (0 g lignin area) for AIW- 4 and AIW-27 were excluded because of growth cessation

**Fig. 18 Change in humic acid in a culture medium of Kabanoanatake, under extreme conditions of restricting the infiltration of oxygen**



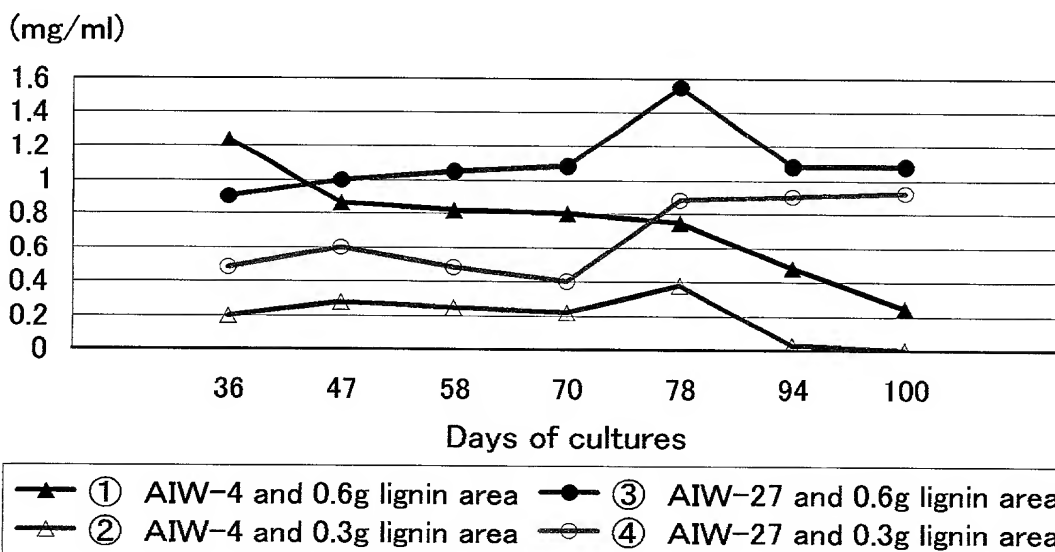
\*The control group (0 g lignin area) for AIW-4 and AIW-27 were excluded because of growth cessation.

**Fig.19 Correlation between the amount of lignin-tannin and days of cultures in a long-term culture of Kabanoanatake added lignin, restricting the infiltration of oxygen**



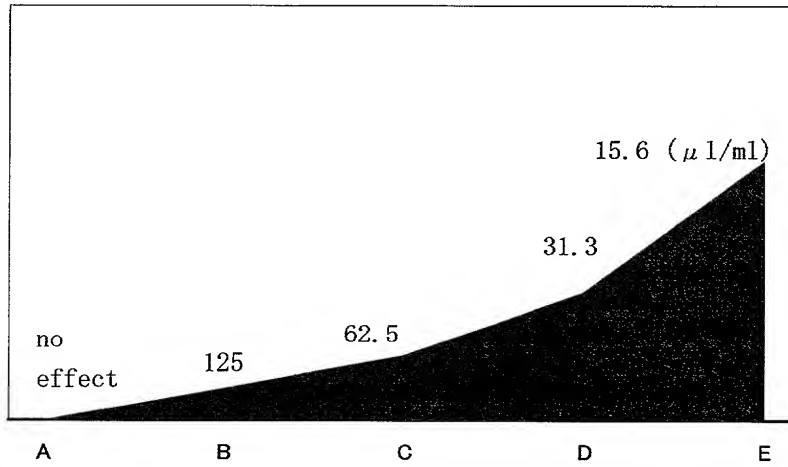
\*The control group (0 g lignin area) for AIW-4 and AIW-27 were excluded because of growth cessation

**Fig.20 Change in protein amount in a long-term liquid culture test of Kabanoanatake, added lignin, under extreme conditions of restricting the infiltration of oxygen**



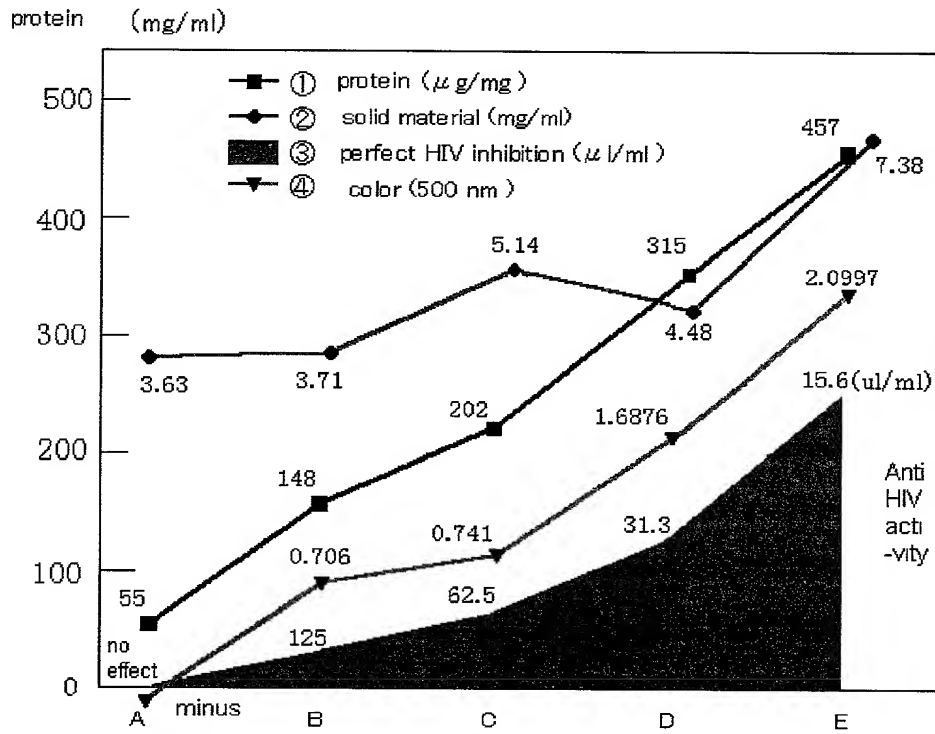
\*The control group (0 g lignin area) for AIW-4 and AIW-27 were excluded because of growth cessation

**Fig.21 Perfect inhibition activity (cells) on HIV, on the 110th day of a liquid culture of Kabanoanatake hyphae, A to E, at the ideal temperature for culture of 25°C**

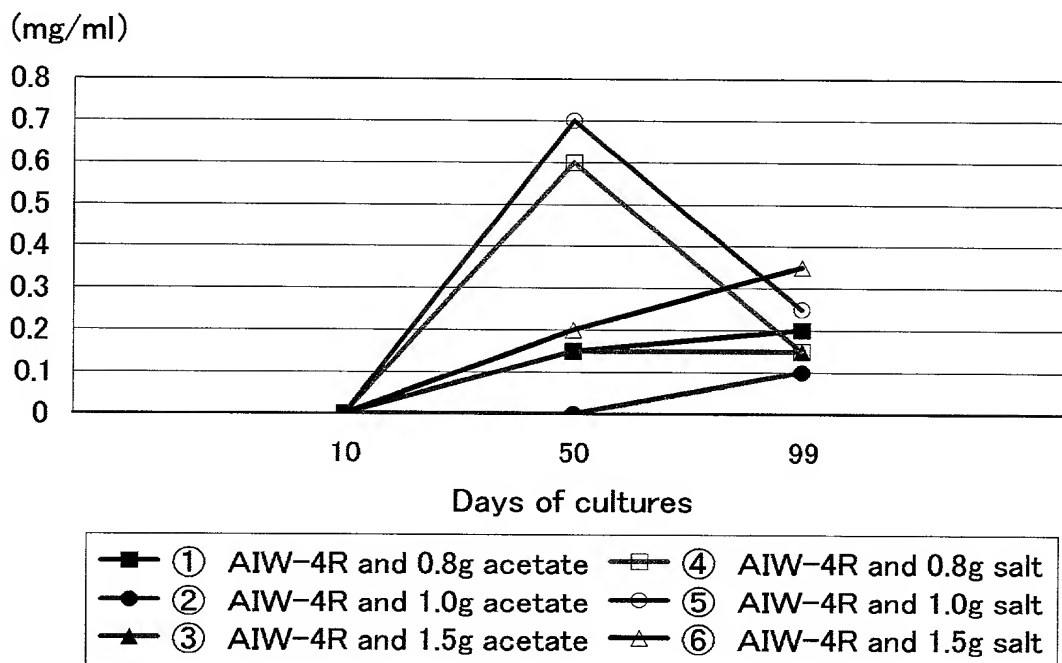




**Fig.22** The values of perfect HIV inhibition activity (100%) on the 110th day of a liquid culture of Kabanoanatake hyphae, A to E, at the ideal temperature for culture of 25°C



**Fig.23** Change in protein content in a liquid culture of hyphae, AIW-4, added lignin substances (lignosulfonic acid sodium salt acetate and lignosulfonic acid sodium salt)



**Fig. 24** Change in protein content in a liquid culture of Kabanoanatake hyphae, A2W-3 and 58-1, when a lignin substance was added

